MANUFACTURING NUMBERS:

9100400
9100402
9100410
9100412

Antunes Foodservice Equipment

DIVISION OF A.J. ANTUNES & CO. · ISO 9001 CERTIFIED

A BRAND OF A.J. ANTUNES & CO.

roundup

ANTUNES FOODSERVICE EQUIPMENT

TACO BELL STEAMER

Models TBS-1X & TBS-2X

P/N 1010698 Rev. E 03/04

Owner's Manual

TABLE OF CONTENTS

Owner Information 2
General 2
Warranty Information 2
Service/Technical Assistance 3
Model Designation 3
Manufacturing Number 3
Important Safety Information 4
Electrical Ratings 6
Dimensions 6
Electrical Cord & Plug Configurations 6
Specifications 6
Capacities 6
Installation 7
Unpacking 7
Equipment Setup 7
Operation 9
Operating Instructions 10
Daily Cleaning 11
Monthly Maintenance 12
Troubleshooting 14
Optional Water Pressure Regulator Kit - Part No. 7000314 16
Wiring Diagram 16
Replacement parts 17
NOTES 19
LIMITED WARRANTY ..... Back Cover

OWNER INFORMATION

General

The Taco Bell Steamer produces steam using plain tap water for quick heating and reconstituting of food items. Simple push-button action delivers a fully adjustable impulse of steam. Because the amount of steam is consistent, it removes the guesswork and produces a uniform finished product from one operator to another.

This manual provides the safety, installation and operating procedures for the Taco Bell Steamer. We recommend that all information contained in this manual be read prior to installing and operating the unit.

Your Taco Bell Steamer is manufactured from the finest materials available and is assembled to Roundup's strict quality standards. This unit has been tested at the factory to ensure dependable trouble-free operation.

Warranty Information

Please read the full text of the Limited Warranty printed on the back cover of this manual.

If the unit arrives damaged, contact the carrier immediately and file a damage claim with them. Save all packing materials when filing a claim. Freight damage claims are the responsibility of the purchaser and <u>are not</u> covered under warranty.

The warranty **does not** extend to:

- **Damages caused in shipment or damage as result of improper use.**
- **Installation of electrical service.**
- **Installation of plumbing or water supply, or water pressure regulator (if applicable).**
- **Calibration, adjustment or maintenance.**
- **Normal maintenance as outlined in this manual.**
- **Consumable parts such as gaskets, rubber feet, labels, O-rings, etc.**
- **Malfunction resulting from improper maintenance or improper/incorrect voltage supply.**
- **Damage caused by abuse or careless handling.**
- **Damage from moisture into electrical components.**
- **Damage from tampering with, removal of, or changing any preset control or safety device.**

IMPORTANT! Keep these instructions for future reference. If the unit changes ownership, be sure this manual accompanies the equipment.

OWNER INFORMATION (continued)

Service/Technical Assistance

If you experience any problems with the installation or operation of your unit, contact your local Roundup Authorized Service Agency. They can be found in the service agency directory packaged with the equipment.

Fill in the information below and have it handy when calling your authorized service agency for assistance. The serial number is on the specification plate located on the side of the unit.

Purchased From: _____

Date of Purchase: _____

Model No.: _____

Serial No.: _____

Mfg. No.: _____

Refer to the service agency directory and fill in the information below:

Authorized Service Agency

Name: _____

Phone No.: _____

Address: _____

Use only genuine Roundup replacement parts in this unit. Use of replacement parts other than those supplied by the manufacturer will void the warranty. Your Authorized Service Agency has been factory trained and has a complete supply of parts for this unit.

You may contact the factory at **1-877-392-7854** or **1-630-784-1000 outside the United States** if you have trouble locating your local authorized service agency or need technical assistance.

A.J. Antunes & Co. reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment.

IMPORTANT SAFETY INFORMATION

Throughout this manual, you will find the following safety words and symbols that signify important safety issues with regards to operating or maintaining the equipment.

⚠ WARNING ⚠

GENERAL WARNING. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment and/or severe bodily injury or death.

⚠ WARNING ⚠

ELECTRICAL WARNING. Indicates information relating to possible shock hazard. Failure to observe may result in damage to the equipment and/or severe bodily injury or death.

⚠ CAUTION ⚠

GENERAL CAUTION. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment.

WARNING

HOT SURFACE WARNING. Indicates information important to the handling of equipment and parts. Failure to observe caution could result in personal injury.

In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

- Read all instructions before using equipment.
- For your safety, the equipment is furnished with a properly grounded cord connector. Do not attempt to defeat the grounded connector.
- Install or locate the equipment only for its intended use as described in this manual. Do not use corrosive chemicals in this equipment.
- Do not operate this equipment if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
- This equipment should be serviced by qualified personnel only. Contact the nearest Authorized Service Agency for adjustment or repair.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.

The following warnings and cautions appear throughout this manual and should be carefully observed.

- **Turn the unit off, disconnect the power source and allow unit to cool down before performing any service or maintenance on the unit.**
- **The procedures in this chapter may include the use of chemical products. These chemical products will be highlighted with bold face letters followed by the abbreviated HCS (Hazard Communication Standard). See Hazard Communication Standard manual for the appropriate Material Safety Data Sheets (MSDS).**
- **The equipment should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with separate electrical lines, protected by fuses or circuit breaker of the proper rating.**
- **All electrical connections must be in accordance with local electrical codes and any other applicable codes.**

IMPORTANT SAFETY INFORMATION (continued)

- **WARNING ELECTRICAL SHOCK HAZARD. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.**
  - **Electrical ground is required on this appliance.**
  - **Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.**
  - **Do not use an extension cord with this appliance.**
  - **Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.**
- **This equipment is to be installed to comply with the basic plumbing code of the Building Officials and Code Administrators, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).**
- **Water pressure must not exceed 30 psi (2.1 kg/cm^2 or 207 kPa). Higher water pressures may cause poor performance or flooding. To reduce water pressure, install a water pressure regulator and set water pressure between 20-30 psi (1.4 - 2.1 kg/cm^2 or 138 - 207 kPa). To order a water pressure regulator from your authorized service center, order Roundup part number 7000314.**
- **Do not clean this appliance with a water jet.**
- **Do not use a sanitizing solution or abrasive materials. The use of these may cause damage to the stainless steel finish.**
- **To ensure proper steaming characteristics, some mineral deposits must be present on generator surface. If, during cleaning, the surface does become free of mineral deposits, add plain tap water to surface and allow it boil off. This will ensure proper steaming characteristics by creating a thin layer of mineral deposits on the casting.**
- **Chlorides or phosphates in cleansing agents (e.g. bleach, sanitizers, degreasers or detergents) could cause permanent damage to stainless steel equipment. The damage is usually in the form of discoloration, dulling of metal surface finish, pits, voids, holes or cracks. This damage is permanent and not covered by warranty:**

  The following tips are recommended for maintenance of your stainless steel equipment,
  - **Always use soft, damp cloth for cleaning, rinse with clear water and wipe dry. When required, always rub in direction of metal polish lines.**
  - **Routine cleaning should be done daily using soap, ammonia detergent and water.**
  - **Stains and spots should be sponged using a vinegar solution as required.**
  - **Finger marks and smears should be rubbed off using soap and water.**
  - **Hard water spots should be sponged using a vinegar solution.**

SPECIFICATIONS

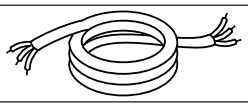
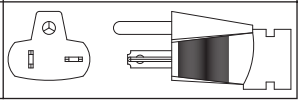
Electrical Ratings

Model and Manufacturing Number	Voltage	Watts	Amps	Hertz
TBS-2X 9100400 (per side)	208	3300	15.9	50/60
TBS-1X 9100410	208	3300	15.9	50/60

⚠ CAUTION ⚠

The TBS-2X has two power cords. Connect each plug to a receptacle that is connected to an individual circuit.

Electrical Cord & Plug Configurations

Letter Code*	Description	Configuration
C	Commercial Cord	
(C)V**	6-20P, 20 Amp., 250 VAC., Non – Locking (Assembly Only).	

** Used in Model Designation*
*** Indicates that the plug comes with a Commercial Cord.*

⚠ WARNING ⚠

All electrical connections must be in accordance with local electrical codes and any other applicable codes.

⚠ WARNING ⚠

ELECTRICAL SHOCK HAZARD.

FAILURE TO FOLLOW THE INSTRUCTIONS IN THIS MANUAL COULD RESULT IN SERIOUS INJURY OR DEATH.

- **Electrical ground is required on this appliance.**
- **Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.**
- **Do not use an extension cord with this appliance.**
- **Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.**

Model Designation

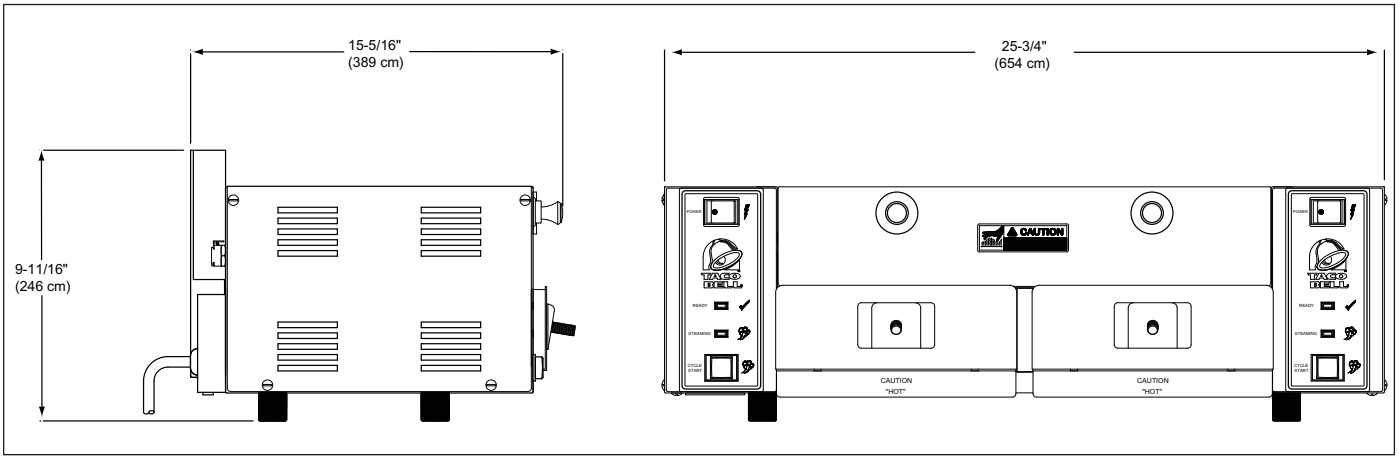
TBS-2X

Single or Dual Capacity
1 = Single Chamber
2 = Dual Chamber

Capacities

- TBS-1X: one Taco Bell product
- TBS-2X: two Taco Bell products

Dimensions



INSTALLATION

Unpacking

1. Remove unit and all packing materials from shipping carton.
2. The box should contain the following:
   - Taco Bell Steamer
   - Handle & Handle Guard (Qty. 2 for TBS-2X)
   - Water Quick Disconnect Kit (Qty. 2 for TBS-2X)
   - Water Measuring & Calibration Kit

NOTE: If any parts are missing or damaged, contact Antunes Technical Service IMMEDIATELY at 1-877-392-7854 or 1-630-784-1000.

3. Remove all packing materials and protective coverings from the unit.
4. Remove and wash the spatula(s) and liner(s) in soap and water. Rinse with clean hot water and allow to air dry.
5. Wipe all surfaces of the unit with a hot damp cloth.

NOTE: Do not use a dripping wet cloth. Wring out before use.

6. Assemble the handle and handle guard to the spatula(s) as shown in Figure 1.
7. Re-install spatula(s).

Equipment Setup

GENERAL

When placing the unit into service, pay attention to the following guidelines:

- Make sure power to the unit is off and the unit is at room temperature.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.

⚠ CAUTION ⚠

All electrical connections must be in accordance with local electrical codes and any other applicable codes.

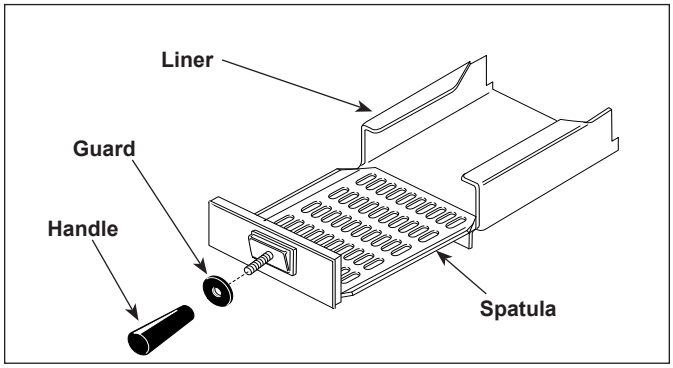


Figure 1. Assembling

ELECTRICAL

1. Place the unit on a sturdy, level table or other work surface. Turn off the Rocker Switch (power On/Off) before proceeding.
2. Connect the unit to the power supply.

⚠ CAUTION ⚠

The TBS-2X has two power cords. Connect each plug to a receptacle that is connected to an individual circuit.

INSTALLATION (continued)

⚠ WARNING ⚠

ELECTRICAL SHOCK HAZARD.

BE SURE TO READ ALL INFORMATION AND FOLLOW ALL SAFETY PROCEDURES IN THE IMPORTANT SAFETY INFORMATION SECTION OF THIS MANUAL BEFORE PERFORMING ANY OF THESE STEPS.

PLUMBING

IMPORTANT: Taco Bell Corporation REQUIRES installation of a Water Demineralizer system for supplying water to this equipment. To purchase the water filtration system, contact the approved equipment distributor.

⚠ CAUTION ⚠

This equipment is to be installed to comply with the basic plumbing code of the Building Officials and Code Administrators, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).

⚠ CAUTION ⚠

Connect this unit to COLD WATER SUPPLY LINE ONLY. Connecting this unit to a hot water supply line will VOID THE WARRANTY!

NOTE: Flexible tubing (not supplied) for water hookup should be a minimum 1/4"1 (6.5 mm) I.D.

1. Connect the flexible tubing to the quick disconnect insert using the supplied hose clamp.
2. Push the Quick Disconnect Insert into the female fitting on the back of the unit until it clicks (Figure 2).

IMPORTANT: The TBS-2X has two fittings on the back of the unit; one for each side.

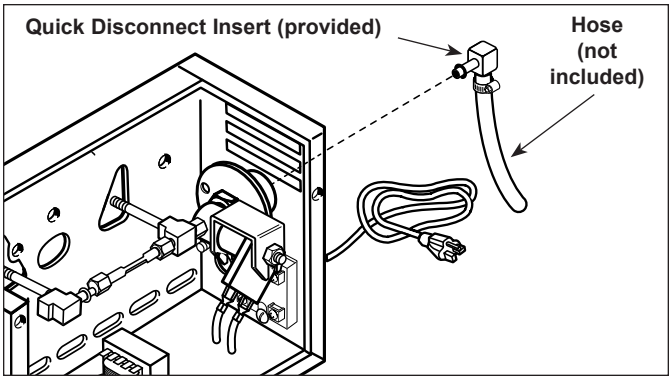


Figure 2. Connecting Water Supply (back of unit)

⚠ CAUTION ⚠

Water pressure must not exceed 30 psi (2.1 kg/cm^2 or 207 kPa). Higher water pressures may cause poor performance or flooding. To reduce water pressure, install a water pressure regulator, and set water pressure between 20-30 psi (1.4 - 2.1 kg/cm^2 or 138 - 207 kPa). To order a water pressure regulator from your authorized service center, order Roundup part no. 7000314.

CALIBRATION

A Water Measuring and Calibration Kit is supplied with your unit and consists of the following items:

- Two 24" Teflon tubes
- One Measuring Cup

⚠ CAUTION ⚠

This procedure exposes hot surfaces. Use extreme care when performing procedure as to avoid personal injury.

1. Turn the Rocker Switch (power On/Off) to the OFF position and allow the unit to cool down before proceeding.
2. Remove the Top Cover, Generator Cover, and Diffuser Plate (Figure 4).
3. Insert the slanted end of the Calibration Tube into Steam Generator hole and push in fully (Figure 5).

NOTE: If tube will not push in easily, the hole could be clogged with mineral deposits. Use a flat-bladed screwdriver to scrape deposits out of the holes.

4. Put other end of calibration tubes into the calibration cup (Figure 6).
5. Turn the Rocker Switch (power On/Off) to ON.
6. Press the Cycle Start button and operate the unit through two complete cycles to purge all air from the tubes.

NOTES: Water may come out of the calibration tubes with force. Hold the tubes and cup firmly.

7. Empty all water from the cup, then reinsert the tubes back into the cup. Press the Cycle Start button to run one cycle. The cup should contain 0.8 oz (25 ml or 25 cc) water. If the cup contains more or less than this amount, proceed to Step 8.

INSTALLATION (continued)

8. With the unit positioned at the edge of its location surface (Edge of the counter, table, etc.) slide the steamer forward approximately 3" to expose the Water Volume Control on the button of the unit (Figure 7).
9. Using a small screwdriver (Figure 7), carefully and slowly adjust the control clockwise to increase or counterclockwise to decrease the amount of water volume used per cycle.
10. Repeat steps 7 through 9 until the proper amount of water level in the club is achieved.

NOTE: If steamer does not steam properly after calibration, refer to the Troubleshooting section of this manual.

NOTE: If the Calibration Kit is missing, use the Calibration Chart (Figure 8) to figure the approximate volume. Turn the water volume control to 0. Determine your water pressure and locate it on the chart (left side), then look to the right to find the volume closest to 0.8 oz. (25 ml or 25 cc). Turn adjustment clockwise to setting shown at top of chart.

OPERATION

Technical Theory of Operation

When the Rocker Switch (power On/Off)is ON, line voltage flows to the primary side of the step down transformer. The transformer's secondary side supplies 12 and 24 VAC to the Control Board. Once powered and provided that the Generator's temperature is below 380 F (193 C), the Control Board calls for heat by supplying 7-10 VCD to Solid State Relay terminals 3 (+) 4 (-).

Once powered, the relay closes terminals 1 and 2, which allows line voltage to flow to the Generator. As the Generator heats up, a type "J" Thermocouple monitors the internal Generator temperature. As the heat continues to increase, so does the Thermocouple's DC milivolts. Once the Generator temperature pproaches 380-420 F (193-215 C), the Thermocouple is generating approximately 12 - 12 DC millivolts.

The Control Board receives these millivolts and then removes the 7-10 VDC to the Solid State Relay, since the heating circuit has now become satisfied. Then, terminals 1 and 2 of the Solid State Relay open and the Generator stops heating.

The heating circuit will cycle on and off as needed, even at idle. When the cycle start (momentary) button is pressed, it signals the Control Board to initiate a steam cycle. The Control Board then supplies 24 VAC to the Solenoid Valve for a split second. The Solenoid valve opens, and allows approximately 3/4 - 1 ounce (4-5 tablespoons) of water to be disbursed onto the Generator Surface for steaming.

Since the Generator has an oval cover that is secured in place with a wing nut, the steam is forced downward throught the Generator steam ports and onto the product.

The Control Board incorporates several LEDs for status and diagnostic purposes. See "LED Layout" in the Operation section of this manual.

An audio signal will sound for 3 seconds at the end of a steaming cycle. If the heating circuit continues to call for heat and the Generator overheats, an automatic reset Hi-Limit will trip and open both the Generator and Transformer circuits. The Hi-Limit will reset automatically once the Generator cools down.

NOTE: If this condition should repeat, the root cause must be determined and corrected.

LED Layout

This section describes the four LEDs used by the system for status and diagnostic purposes.

- **CR6 RED (Heat)**: When lit, this LED indicates that the Control Board is calling for heat by supplying 7-10 VDC to the Solid State Relay.

  When off, this LED indicates that the Generator is up to operating temperature.
- **CR7 GREEN (Solenoid Valve)**: When lit, this LED indicates that the Control Board is supplying 24 VAC to the Solenoid Valve.

NOTE: This LED is only lit for a split second.

- **CR8 YELLOW (Audio)**: When lit, this LED indicates that the Control Board is supplying 10 VDC to the audio signal. The audio signal and LED will activate for 3 seconds at the completion of a steam cycle.
- **CR10 YELLOW (Thermocouple)**: When lit, this LED indicates that the Thermocouple is disconnected or "open" and the Control Board will not call for heat.

NOTE: This LED should NOT be lit during normal operation.

OPERATION (continued)

Operating Instructions

IMPORTANT: Steam generator must be calibrated before initial use. See the section titled Calibration in the Installation section of this manual.

1. Turn on the Rocker Switch (power On/Off) (Figure 3).
2. Allow the unit to preheat for approximately 20-30 minutes.

IMPORTANT: The green light will flash during warm-up. The flashing green ready light will become steady when the unit is up to temperature. If green light continues to flash after warm-up, or starts to flash during operation, see the TROUBLESHOOTING section in this manual.

IMPORTANT: Do not push the Cycle Start button during warm-up. The flashing green light indicates unit is not up to temperature.

3. Pull out the Spatula and place the product to be steamed onto the Spatula.
4. Push the Spatula fully into the steamer.
5. Press and release the Cycle Start button The green “Ready” light will go out and the yellow “Steaming” light will come on and remain lit for the entire steaming cycle.
6. At the end of the steaming cycle (approximately 7 seconds), an audible signal will sound for 3 seconds and the green “Ready” light will come back on. These signals inform the operator that the product is ready for serving.
7. Remove the steamed product.

⚠WARNING⚠

To avoid injury, use caution when pulling spatula out from unit. Be sure to allow steam to escape before putting hands or face over the steamer.

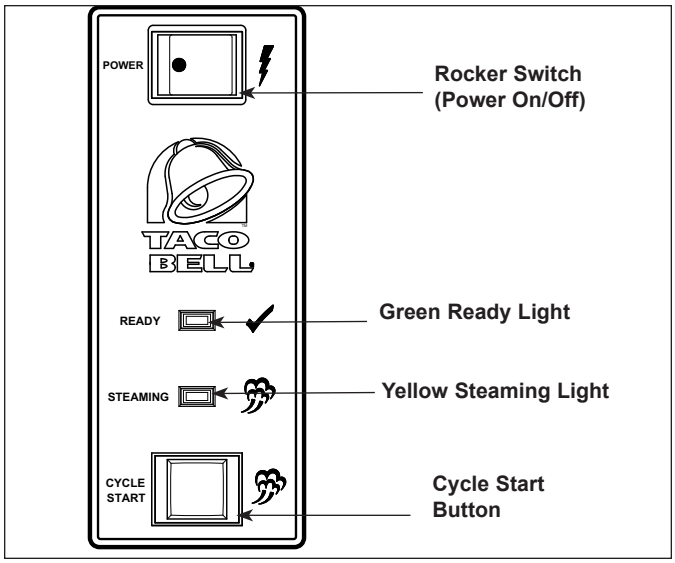


Figure 3. Operating Controls

Hi-Limit Thermostat

A hi-limit thermostat will turn off electrical power to the generator and Transformer circuits if the unit overheats. Turn unit off and allow to cool; the hi-limit thermostat will automatically reset when the unit cools down. If the unit continues to shut off due to overheating, contact your Roundup authorized service agency.

MAINTENANCE

⚠ WARNING ⚠

Turn the unit off, disconnect the power source and allow the unit to cool down before performing any service or maintenance on the unit. The TBS-2X has two power cords. Make sure both cords are disconnected.

⚠ CAUTION ⚠

Chlorides or phosphates in cleansing agents (e.g. bleach, sanitizers, degreasers or detergents) could cause permanent damage to stainless steel equipment. The damage is usually in the form of discoloration, dulling of metal surface finish, pits, voids, holes or cracks. This damage is permanent and not covered by warranty. The following tips are recommended for maintenance of your stainless steel equipment:

- **Always use soft, damp cloth for cleaning, rinse with clear water and wipe dry. When required, always rub in direction of metal polish lines.**
- **Routine cleaning should be done daily using soap, detergent, and water.**
- **Stains and spots should be sponged using a vinegar solution.**
- **Finger marks and smears should be rubbed off using soap and water.**
- **Hard water spots should be sponged using a vinegar solution.**

⚠ CAUTION ⚠

Do not use a sanitizing solution or abrasive materials. The use of these may cause damage to the stainless steel finish.

⚠ CAUTION ⚠

If a chemical cleaner is used, be sure it is safe to use on cast aluminum. Observe all precautions and warnings on product label.

NOTE: Frequency of cleaning is determined by water conditions, usage, and water filter systems.

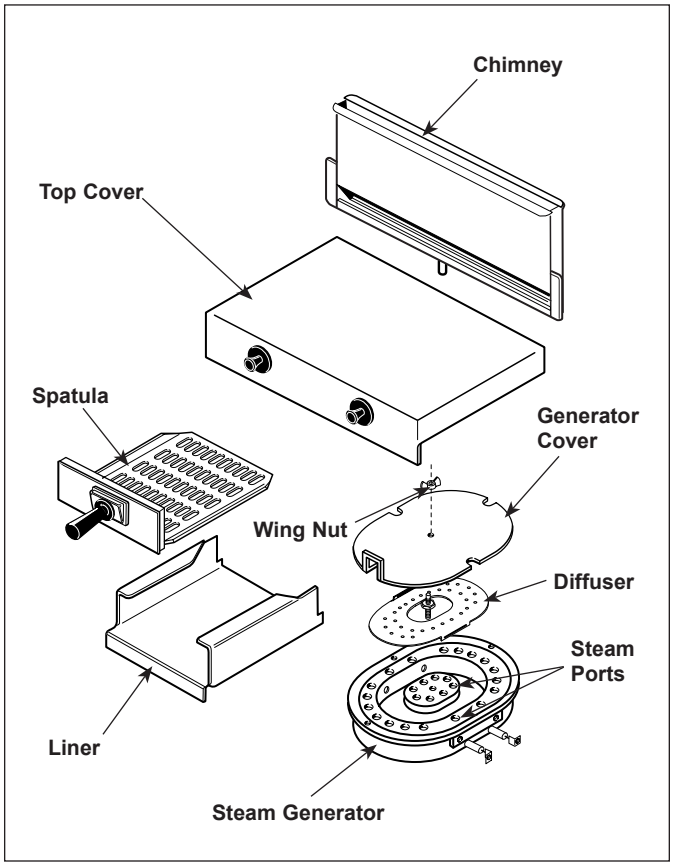


Figure 4. Steamer Components

Daily Cleaning

1. Turn the Rocker Switch (power On/Off) to OFF, unplug the power cord(s), and allow the unit to cool down before proceeding.
2. Check the water quick disconnect fitting and all hose clamp connections for leakage. If leakage is apparent, tighten all clamps or replace part if required.
3. Remove the Top Cover, Spatula(s), and Liner(s) (Figure 4).
4. Remove Chimney from rear of unit by sliding upward and away from unit (Figure 4). Clean the Top Cover, Spatula(s), Liner(s), and chimney in hot soapy water, rinse in clear water and wipe dry.
5. Clean the chamber(s) of any product spills.
6. Clean entire unit with a clean, hot, damp cloth (not dripping wet) and wipe dry.
7. Re-install chimney, liner(s) and spatula(s) and Top Cover.

MAINTENANCE (continued)

Monthly Maintenance

Your steamer utilizes an open steam generator. Water sprayed onto the generator surface flashes into steam immediately, but the minerals in the water do not steam; they stay on the generator surface. **A small amount of mineral deposits are needed for proper operation**, but a build-up of excessive mineral deposits causes poor steaming efficiency, excessive moisture (wet steam) and will eventually severely retard the steaming action completely.

CLEANING STEAM GENERATOR

1. Turn the Rocker Switch (power On/Off) to OFF, unplug the power cord(s), and allow the unit to cool down before proceeding.
2. Remove Top Cover from unit.
3. Remove wing nut and Generator cover (Figure 4).
4. Remove Steam Diffuser.
5. Examine all Generator steam ports (Figure 4). If mineral deposits have formed, place a flat blade screwdriver or wire brush into openings. Use a twisting motion to scrape openings clean.

NOTE: If the mineral deposits come off in "flakes" or in layers, build-up is excessive.

6. Use a brass or stainless steel wire brush and small scraper to loosen and remove excessive deposits from the generator surface. If deposits are still excessive and/or difficult to remove, go to Step 7.
7. Pour delimer solution (not supplied) onto the generator surface. Be sure to follow the delimer manufacturer's directions for proper mixture and use; it must be safe to be used on aluminum.

⚠ CAUTION ⚠

If a chemical cleaner/delimer is used, be sure it is safe to use on cast aluminum. Observe all precautions and warnings on the product label.

8. Remove the delimer solution from the generator and rinse with clear water to remove traces of delimer.
9. Clean the following parts in hot, detergent water, then rinse in clear water and wipe dry:
   - Spatula
   - Chimney
   - Top Cover
   - Liner
   - Diffuser
   - Generator Cover
10. Clean Steam Chamber free of any product spills.
11. Clean unit surface with a hot, clean, damp cloth (not dripping wet) and wipe dry.
12. Re-install all parts and fasten the generator cover.

IMPORTANT: To ensure proper steaming characteristics, some mineral deposits must be present on generator surface. If during cleaning, the surface does become free of mineral deposits (bare aluminum), add plain tap water to surface and allow to boil off.

IMPORTANT: In soft water areas, it may be necessary to add a small amount of lime to generator surface to "season" it. This will ensure proper steaming characteristics by producing a thin coating of mineral deposits on the surface. Seasoning mixture consists of 75 ml. baking soda, 75 ml. lime, and 1 gallon water. Pour 1/4" deep of seasoning mixture onto hot generator. After mixture is converted to steam, the remaining loose powder can be removed.

13. Plug in power cord(s) and water line(s).

CALIBRATION

A Water Measuring and Calibration Kit is supplied with your unit and consists of the following items:

- Two 24" Teflon tubes
- One measuring cup

WARNING

This procedure exposes hot surfaces. Use extreme care when performing procedure to avoid personal injury.

1. Turn the Rocker Switch (power On/Off) to OFF and allow the unit to cool down before proceeding.
2. Remove the Top Cover, Generator Cover, and Diffuser Olate (Figure 4).
3. Insert the slanted end of the calibration tube into steam generator hole and push in fully (Figure 5).

NOTE: If tube will not push in easily, the hole could be clogged with mineral deposits. Use a flat-bladed screwdriver to scrape deposits out of the holes.

4. Put other end of calibration tubes into the calibration cup (Figure 6).

MAINTENANCE (continued)

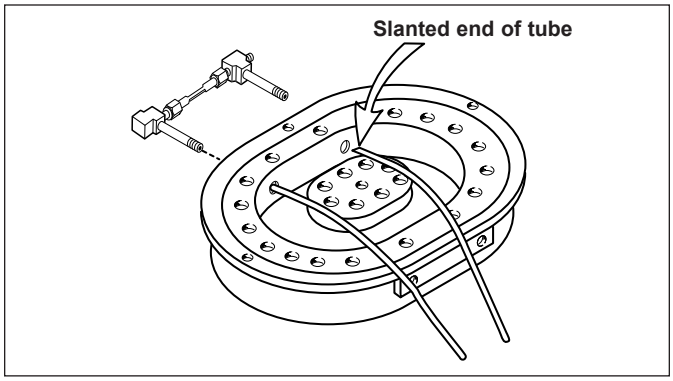


Figure 5. Installing Calibration Tubes

5. Turn the Rocker Switch (power On/Off) to ON.
6. Press the Cycle Start button and operate the unit through two complete cycles to purge all air from the tubes.

NOTE: Water may come out of the calibration tubes with force. Hold the tubes and cup firmly.

7. Empty all water from the cup, then reinsert the tubes back into the cup. Press the Cycle Start button to run one cycle.

   The cup should contain 0.8 oz. (25 ml or 25 cc). If cup contains more or less of this amount, proceed to Step 8.

8. With the unit positioned at the edge of its location surface (edge of the counter, table, etc.) slide the steamer forward approximately 3" to expose the Water Volume Control on the bottom of the unit (Figure 7).
9. Using a precision flat blade screwdriver, carefully and slowly adjust the control **clockwise to increase** or **counterclockwise to decrease** the amount of water used per cycle.
10. Repeat steps 7 - 9 until the proper amount of water level in the cup is achieved.

NOTE: If steamer does not steam properly after calibration, refer to the Troubleshooting section of this manual.

NOTE: If calibration kit is missing, use the Calibration Chart (Figure 8) to figure approximate volume. Turn the water volume control to 0. Determine your water pressure and locate it on the chart (left side), then look to the right to find the volume closest to 0.8 oz. (25 ml or 25 cc). Turn adjustment clockwise to setting shown at the left of chart.

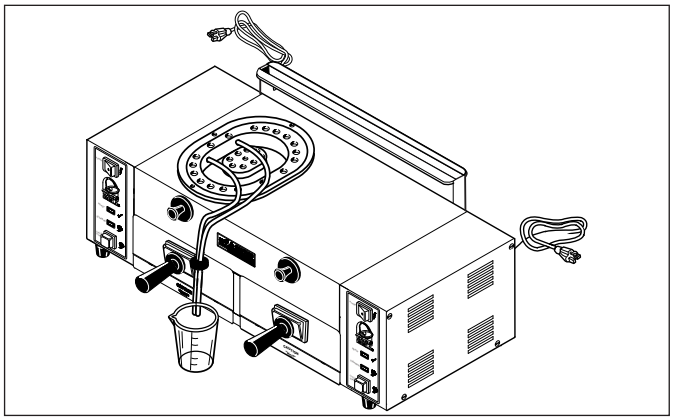
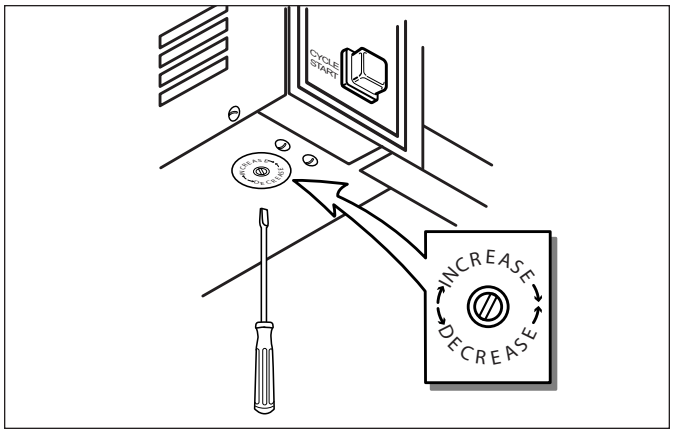


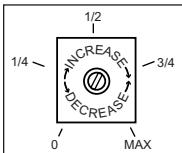
Figure 6. Water Measurement



⚠CAUTION ⚠

Excessive force will damage this control. Do not turn past built-in stops on the control or damage to the unit will occur and void the warranty.

Figure 7. Water Volume Adjustment



Water Pressure	Water Volume Adjustment 0	1/4	1/2	3/4	MAX
15 psi	–	10 ml	20 ml	25 ml	32 ml
20 psi	–	15 ml	23 ml	30 ml	37 ml
30 psi	–	16 ml	27 ml	35 ml	48 ml
35 psi	5 ml	20 ml	30 ml	40 ml	50 ml
35 psi	7 ml	21 ml	32 ml	42 ml	55 ml
40 psi	9 ml	22 ml	37 ml	45 ml	60 ml

Figure 8. Calibration Chart

TROUBLESHOOTING

⚠ WARNING ⚠

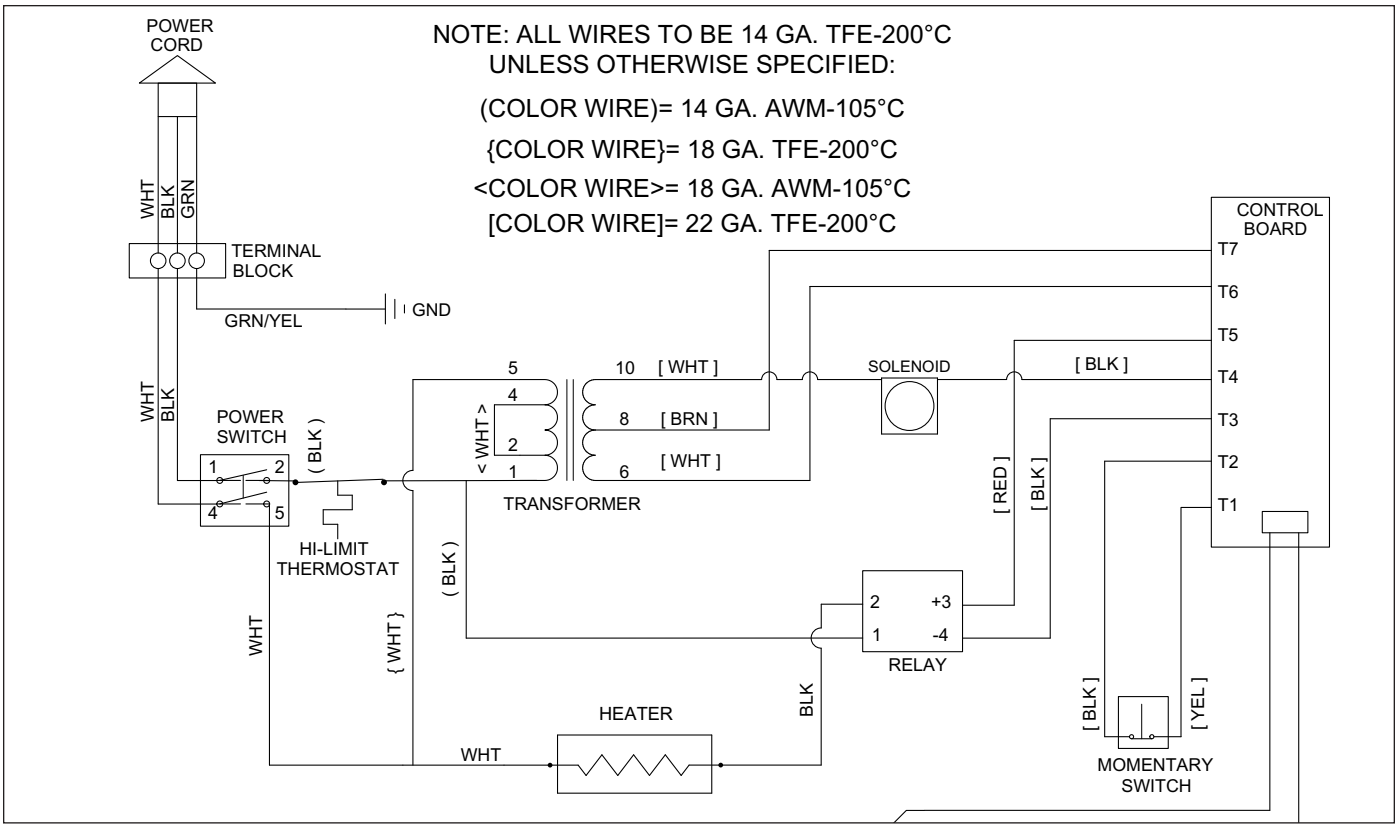
To avoid possible personal injury and/or damage to the unit, inspection, test and repair of electrical equipment should be performed by qualified service personnel. The unit should be unplugged when servicing, except when electrical tests are required. Use extreme care during electrical circuit tests. Live circuits will be exposed. If the troubleshooting steps listed do not solve your machine problem, contact an Authorized Service Agency for further assistance.

Problem	Possible Cause(s)	Corrective Action
Unit steams, but requires 2 or more cycles to melt cheese.	Generator surface temperature is too low	Verify Generator surface temperature to be 380-420°F.
	Insufficient or excessive calcium deposits on Generator surface.	Verify Generator surface has a thin calcium coating for proper steaming. Refer to the Maintenance section of this manual.
	Generator Cover is warped or loose.	Verify that the Generator Cover wingnut is tight. If noticable steam excapes around the Generator Cover, replace the Generator Cover.
	Low water pressure.	Verify Water Pressure regulator is set to 20-30 psi, adjust accordingly.
	Water Volume Adjustment is set too low.	Calibrate unit for proper water volume. Refer to the Maintenance section of this manual.
	Generator Steam Ports are restricted.	Verify that the Steam Ports are not restricted. Clean accordingly.
	Generator surface is bare.	Generator surface must have a thin calcium coating for proper steaming. Refer to the Maintenance section of this manual.
Unit heats but does not steam.	Low or no water pressure in water line.	Remove the Quick Disconnect Insert from the rear of the unit. While holding into an empty cup, press the white plastic tip. Strong steady water flow should be noted. If so, re-engage firmly into the unit. If not present, or low pressure, contact your maintenance person or plumber.
	Solenoid Valve Coil is “open.”	Verify that there are 8-20 Ohms on the coil.
	Control Board inoperable or problematic.	Verify 24 VAC to Solenoid Valve Coil when the Cycle Start button is pushed. **NOTE: Wires must be left attached to valve and voltage is only read for a split second.** If there is no voltage, replace the Control Board
	Quick Disconnect is not fully engaged at rear of unit or is damaged.	Remove and re-engage the Quick Disconnect firmly until a “click” is heard. Replace if damaged.
	Cycle Start switch inoperable.	Verify continuity when the switch is pressed. If there is no continuity replace the switch.
Excessive condensation in Food Compartment.	Water pressure is too high.	Verify Water Pressure Regulator is set to 20-30 psi, adjust accordingly.
	Water Volume Adjustment is set too high.	Calibrate unit for proper water volume. Refer to the Maintenance section of this manual.

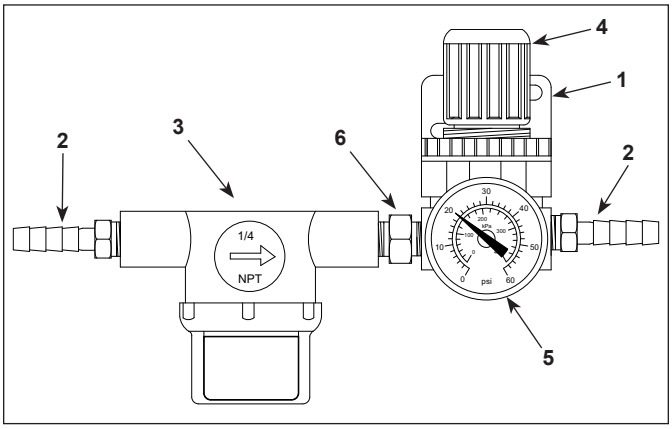
TROUBLESHOOTING (continued)

Problem	Possible Cause(s)	Corrective Action
Unit only leaks water when powered off.	Solenoid Valve is leaking due to debris trapped within its plunger and seat.	Disassemble the Solenoid Valve and clean out the plunger. Reassemble and test. If the a leak is still present, replace the Solenoid Valve.
	Solenoid Valve is installed incorrectly.	If the Solenoid Valve was replaced, verify that the “IN” and “OUT” labels on the valve correspond to the water flow.
Unit only leaks water when powered on.	Control Board inoperable or problematic.	If 24 VAC is measured across the Solenoid Valve Coil for over 2 seconds (with wires still attached to the coil), replace the Control Board.
No heat and the green ready light flashes continuously.	Generator is “open.”	Verify that there are 13 Ohms for a 208 volt generator and 17.5 Ohms for a 240 volt generator (plus or minus 1 Ohm). Replace if the generator fails test.
	Solid State Relay not closing.	Verify that there is 7-10 VDC on relay terminals 3 (+) 4(-). If present, check for line voltage across relay terminals 1 and 2. If present, replace the relay.
	Control Board inoperable or problematic.	Verify that there is 7-10 VDC on terminals T5 & T3. If not present, replace the Control Board.
	Loose, burnt, or broken wires in heater circuit.	Repair or replace wires.
	Circuit is wired incorrectly.	Verify that all wiring matches the Wiring Diagram in this manual.
Unit does not operate, power switch is on but light is off.	Unit unplugged.	Plug Power Cord into the appropriate outlet.
	Circuit breaker is off.	Reset the circuit breaker.
	Power Cord defective or inoperable.	Check for continuity.
	Power Switch defective or inoperable.	
Green “Ready” light and “Yellow” steaming light turn on and off intermittently.	Hi-Limit is tripping because of an overheating Generator.	Verify that the generator surface temperature is between 380-420° F. If the temperature is above 420° F, contact your maintenance person or Authorized Service Agency.
	Hi-Limit is tripping prematurely.	If the Hi-Limit trips within 380-420° F, replace the Hi-Limit thermostat.

WIRING DIAGRAM



OPTIONAL WATER PRESSURE REGULATOR KIT - PART NO. 7000314

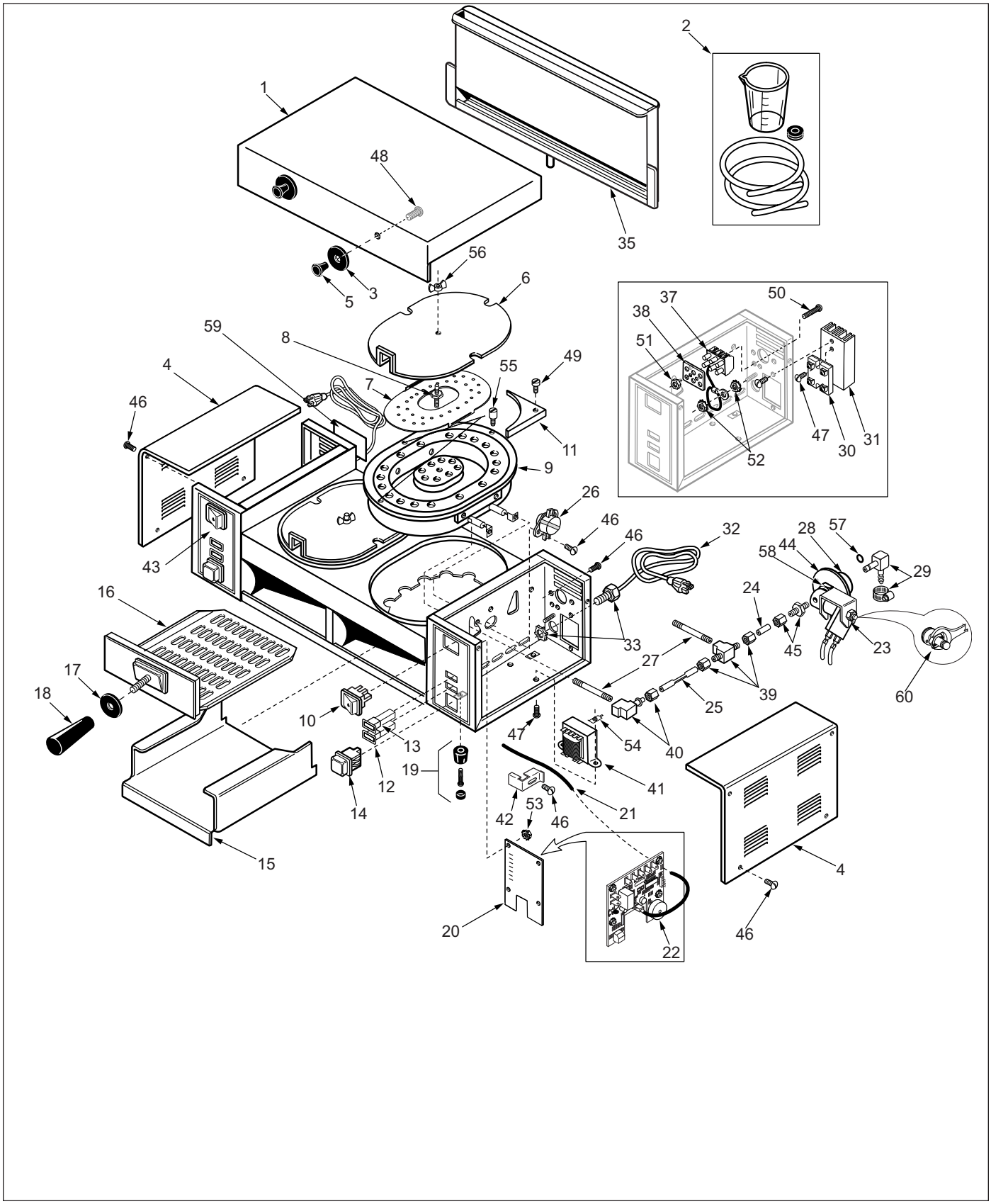


General: This kit protects your equipment from any foreign debris in the water line that could get into the food, damage the unit's solenoid (causing the unit to leak or flood) and also prevents excessive and/or fluctuation water pressure from interfering with the equipment's proper and consistent operation.

The 7000134 Regulator Kit consists of the following items:

Ref.	Part No.	Description	Qty.
1	0503849	Bracket	1
2	2040130	Male Adapter, Barbed -1/4"	2
3	2090127	Strainer - 1/4 NPT	1
4	2170113	Regulator, Pressure	1
5	2170114	Gauge, Water Pressure	1
6	2190129	Nipple, 1/4 NPT x 1/4" NPT	1
7	2110104	Clamp, worm drive (not shown)	2
8	1010790	Instruction sheet (not shown)	1

REPLACEMENT PARTS



REPLACEMENT PARTS (continued)

Item	Part No.	Description	Qty. TBS-1X	Qty. TBS-2X
1	0011229	Top Cover Assy.	1	
	0011198	Top Cover Assy.		1
2	7000150	Calibration Kit	1	1
3	2100250	Guard, Knob, Top Cover	1	2
4	0503087	Cover, Control Housing	1	2
	0503226	Cover, End Housing	1	
5	2100247	Knob	1	2
6	0503085	Cover, Generator	1	2
7	0503592	Diffuser	1	2
8	0300129	Stud	1	2
9	7000430	Generator Kit, (Incl. # 7, 8, 49, 56 & Qty. 3 of 55 & Qty 2 of 27)	1	2
10	4010137	Rocker Switch, Power On/Off	1	2
11	0021110	Corner Filler	4	4
12	4060363	Indicator Light, Yellow, (Steaming Light)	1	2
13	4060362	Indicator Light, Green (Ready Light)	1	2
14	4010166	Switch, Cycle Start	1	2
15	0503315	Liner, Cavity	1	2
16	0020341	Spatula	1	2
17	2100249	Guard, Handle	1	2
18	2100107	Handle	1	2
19	210K230	Bumper Recess 1” Leg Kit (Incl. parts for 4 legs)	1	1
	210K123	4” Leg Kit (Incl 1 leg)	4	4
	210K134	4” Leg Kit (Incl. 4 legs)	1	1
20	7000160	Control Board Kit	1	2
21	4050135	Thermocouple Assy.	1	2
22	7000156	Audio Alarm Kit	1	2
23	4040145	Solenoid Valve, 24 VAC	1	2
24	2000202	Tube, Inlet	1	2
25	2000203	Tube, Restrictor	1	2
26	4030222	Hi-limit Thermostat	1	2
27	2190107	Pipe, Teflon (see Note 2)	2	4
28	2080117	Connector, Quick Disconnect Female	1	2
29	7000139	Connector, Quick Disconnect Male	1	2
30	405K125	Relay, Solid State	1	2

Item	Part No.	Description	Qty. TBS-1X	Qty. TBS-2X
31	4050180	Heat Sink	1	2
32	0700452	Power Cord	1	2
33	040K251	Strain Relief	1	2
35	0021133	Chimney	1	1
	0021136	Chimney	1	1
36	0700554	Wire Set (not shown)	1	2
37	7000136	Terminal Block Kit (Includes 38, 50, & 51)	1	2
38	100P967	Label, Marking	1	2
39	2040146	Tee, Female	1	2
40	2040145	Elbow, Female	1	2
41	7000319	Transformer	1	2
42	0503093	Retainer, Thermocouple	1	2
43	1000975	Label, Control Panel	1	2
44	0503171	Bracket, Mounting	1	2
45	2040103	Valve Connector	1	2
46	308P103*	Screw, #8-32 x 1/4”	1	1
47	308P105*	Screw, #8-32 x 1/2”	1	1
48	308P104*	Screw, #8-32 x 3/8”	1	1
49	306P136*	Screw, #8-32 x 5/8”	1	1
50	306P123*	Screw, Stainless Steel, #6-32 x 7/8”	1	1
51	306P101*	Nut, Hex, #6-32	1	1
52	308P143*	Nut, Hex, KEPS, #8-32	1	1
53	3048105*	Nut, Hex, Zinc, #4-40	1	1
54	300P102*	Nut, Tinnerman, #8-32	1	1
55	306P134	Screw, #6-32 x 3/8”	3	3
56	325P170*	Wingnut, Cast Iron, 1/4”-20	1	1
57	020P117*	O-ring	1	1
58	362P102*	Lock washer, Toothed	1	1
60	7000299	Nut (3-Pak) See Note 1	1	1

** Only available in packages of 10.*

NOTE 1: This special wrench nut is required to separate the stem from the solenoid valve on older solenoid valves

NOTE 2: Always use Teflon® tape on threads and tighten until very snug.

NOTES

LIMITED WARRANTY

Equipment manufactured by A.J. Antunes & Co. Foodservice Equipment has been constructed of the finest materials available and manufactured to high quality standards. These units are warranted to be free from mechanical and electrical defects for a period of one year from date of purchase or 18 months from shipment from factory, whichever occurs first, under normal use and service, and when installed in accordance with manufacturer's recommendations.
To insure continued proper operation of the units, follow the maintenance procedure outlined in the Owner's Manual.

1. This warranty does not cover cost of installation, defects caused by improper storage or handling prior to placing of the Equipment. This warranty does not include overtime charges or work done by unauthorized service agencies or personnel. This warranty does not cover normal maintenance, calibration, or regular adjustments as specified in operating and maintenance instructions of this manual, and/or labor involved in moving adjacent objects to gain access to the Equipment. This warranty does not cover consumable items such as gaskets and light bulbs, nor does it cover water contaminant problems such as foreign material in water lines or inside solenoid valves. It does not cover water pressure problems or failures resulting from improper/incorrect voltage supply.

   For the first 90 (ninety) days after installation (in USA only): The Melter will be repaired in-store (subject to terms of the limited Warranty) by our Authorized Service Agency, at no charge for parts, labor, travel/mileage.

   For the next 9 (nine) months of your warranty (12 months for all other countries): If the Melter is carried into an Authorized Service Agency, it will be repaired (subject to the terms of the Limited Warranty) at no charge for parts and labor. If you request the Authorized Service Agency to service the Melter at your store, the store must pay any charges above and beyond the "SHOP" labor rate for that Service Agency, including travel/mileage charges.

2. Roundup reserves the right to make changes in design or add any improvements on any product. The right is always reserved to modify equipment because of factors beyond our control and government regulations. Changes to update equipment do not constitute a warranty charge.

3. If shipment is damaged in transit, the purchaser should make a claim directly upon the carrier. Careful inspection should be made of the shipment as soon as it arrives and visible damage should be noted upon the carrier's receipt. Damage should be reported to the carrier. This damage is not covered under this warranty.

4. Warranty charges do not include freight or foreign, excise, municipal or other sales or use taxes. All such freight and taxes are the responsibility of the purchaser.

5. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY EXPRESSLY DISCLAIMED. THE REMEDIES DESCRIBED ABOVE ARE EXCLUSIVE AND IN NO EVENT SHALL ROUNDUP BE LIABLE FOR SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OR DELAY IN PERFORMANCE OF THIS WARRANTY.

A.J. Antunes & Co.
ISO 9001 CERTIFIED

180 Kehoe Blvd. • Carol Stream, Illinois 60188

Telephone (630) 784-1000 • FAX (630) 784-1650
Toll Free1-877-392-7854 (in the U.S.A. and Canada)
www.ajantunes.com